

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/549,943  
Source: IFWO  
Date Processed by STIC: 04/05/2007

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 04/05/2007

PATENT APPLICATION: US/10/549,943

TIME: 07:50:22

Input Set : A:\796\_2\_PCT\_SeqListing.TXT

Output Set: N:\CRF4\04052007\J549943.raw

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4 <110> APPLICANT: Genencor International, Inc.
5       Jones, Brian E.
6       Grant, William D.
7       Heaphy, Shaun
8       Grant, Susan
10 <120> TITLE OF INVENTION: Novel Bacillus 029cel Cellulase
13 <130> FILE REFERENCE: GC796-2-PCT
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/549,943
C--> 16 <141> CURRENT FILING DATE: 2005-09-20
18 <150> PRIOR APPLICATION NUMBER: US 60/466,831
19 <151> PRIOR FILING DATE: 2003-04-29
21 <160> NUMBER OF SEQ ID NOS: 3
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 3410
27 <212> TYPE: DNA
28 <213> ORGANISM: Bacillus sp.
30 <220> FEATURE:
31 <221> NAME/KEY: misc_feature
32 <222> LOCATION: (1)...(3410)
33 <223> OTHER INFORMATION: isolated from environmental sample from Sonachi Lake, Kenya
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38 gttggcgatg ccaccggtga ggccttcggg gccgcctacg atgttggtgt cagccgccca      180
39 tgcgatgtag ccgtccggct cgggttcgct cgcggggggtg aagaagacaa tgcgtcgcag      240
40 ataaaaggtt ccgcttcgcg tctcaacgcc gccgaggttg aattggattt cgcaaattct      300
41 cgttaggtcc agcacggaat cgcgcacgag gtcggctatg ggaatctgaa tgcgcccata      360
42 ggggttggga cgcggaaggg acacgtaggg acccactttg tcattgggag agacgagccg      420
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46 ggagagttcc tgcaagccgt cgcgccaaat gcccgatgat agcgttgctt cgtcacggta      660
47 gatcacaagt tcggcggcgg gtgccggggg aagatcgctt tgagtgatca cgagagtggc      720
48 ggtggcgctg ccttcgtgat tagggtcggt aatgggtggc acgaccgtgt agctaccggg      780
49 cccactggc  gcatgggtgg aaccgttgta ggtaaaggag acgtcaagcc ccacgggatg      840
50 ggtctcggca agagcggcct tgggggtgcc gtcgaaaacg tgttccaaat tggagagcgt      900
51 gatggtggcg ggtgccttga gcacagtcac agaaacagtg gattgcacgg gatcgtgcgc      960
52 tgccgtgtct gcaggtgtga agaccacgct gtaaaaacgg gttccggcgg acggtgcaag      1020
53 gccggacagg acaaaggcaa agtcgccggg gacggcggtc actccgccgc tcaggccggc      1080
54 ctccgcaagg gtttgcgcga aggtgatggg tcgggctgtg ggccacatct ccacaaggcc      1140
55 ggtgtcccc  tcgtcacgca ccggcatgag ggccgagagg agatgaatgt aactggcttg      1200
56 gtaattgatg tcgggctcgg tgatttccca tgagttctcc ggccaaaaac cattccaatc      1260

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57 aaggtaggct ttttgcacgg gttgggtctcg gatcgctga atgcttcgc tgtatttggg 1320
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59 tcccagtcgg gccatcgcg aaccaatggg ggtagatttc attggctgca cggtcagcgc 1440
60 cgctggcata catgttgcta agatagacca tgcccattgg gttcactccg tggagatagt 1500
61 gcaggtagcc catcgcgga tcgcatgctg cggccgcgtc ggcgggggtg agcccaagcc 1560
62 tccgtacccc ctcaagaaa aagccagcct gagactttgt tttgttcgag cccacgtgt 1620
63 aatcctgatc cttcaggtag gcgcggtagg cgtcgggtctg gttattccat gcaccgagaa 1680
64 actccccacc gtttatagaa gccgccatcc ggttgcggtat gtcggcagag acgctaggcg 1740
65 tcgctcccgg gagggctcgt tagtgggcca gagctttttg tagctcacct tgaaagggga 1800
66 agaaatacca cactgcacg ggctccatat cgagatagcg cacatcgaag aaatcgcgat 1860
67 agaccgcacc gcccgctgcg tcgaagagca tggcgggcgc catcacacgg ttggctagcg 1920
68 tatcgtgggc attgcgcgag gggctcacgg aagcaaatcc ggtgttgctg aaaggcacat 1980
69 gaggatggac catggtccaa ttccatgcgg cgatggcagc ggattcgagg gtgacggcat 2040
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76 cgaaccaacc gccgctgaga tcgctgcca aggaggcatt ccccatatcc cagatggggc 2460
77 ggctggcgac gtctgcggg tgagaagcgg catcgccca gttcgctgg gcgtagggca 2520
78 cctccttggc aaaccggag cgtgataga agaactgcg caggcctcg cgcaggacaa 2580
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81 ccgattgaat atggatggcg ccgccgttcc acgggaccgg tgagccggag aaaaccacga 2760
82 cgccatcggt cagcgacgg acctccagcg ttgcgcccgg gctgtagctc tcggcgctgt 2820
83 tccagccaat ctgcgggtcg gcgatcaccg ccaccttggg ggcacggcg gggtaaccga 2880
84 attggtcgat gcggtttta tcggtgtggg tggaggcgac gagggcggag ctgccatga 2940
85 gcagcaagaa aaagcccgt gtcggcccga taccaaaaaa acgaataggg agagaaaaat 3000
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87 tggcgaaaac tggatggtt gtttatcaag aaaagcgctt ttgagccaaa agctgcgggc 3120
88 aatccttatt gcgtttcaca atattttcac atcgtcggcg gcacgacttt tcgatgggcg 3180
89 acttgacagc gtattcttc aggcgcgagg ctgcaaacct tatgaaaaaa ggcccgcgca 3240
90 gcgatctgtc ccggtcaaa atccagtcaa ggtttgttca agggtttgag gtctgataga 3300
91 ggcacagtgc agccatcagc agtcgcattg agtagggtt ttggagaaag tgtgcaaatg 3360
92 accgctgcg aaggaactgt ggagacaaaa agcatatttt cctcgccaag 3410

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94 &lt;210&gt; SEQ ID NO: 2

95 &lt;211&gt; LENGTH: 1746

96 &lt;212&gt; TYPE: DNA

97 &lt;213&gt; ORGANISM: Bacillus sp.

99 &lt;220&gt; FEATURE:

100 &lt;221&gt; NAME/KEY: misc\_feature

101 &lt;222&gt; LOCATION: (1)...(1746)

102 &lt;223&gt; OTHER INFORMATION: isolated from environmental sample from Sonachi Lake, Kenya

104 &lt;400&gt; SEQUENCE: 2

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105 atgaattttt ctctccctat tcgttttttt ggtatcgggc cgacagcggg ctttttcttg 60
106 ctgctcatgg gcagctccgc ctcgtcgcc tccaccaca ccgataaaat ccgcatcgac 120
107 caattcgggt accccgccga tgccaccaag gtggcggtga tcgccgacc gcagattggc 180
108 tggaaacagcg ccgagagcta cagccccgc gcaacgctgg aggtccgtcg cgtgaacgat 240

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109 ggcgtcgtgg ttttctccgg ctccaccggtc ccgtggaacg gcggcgccat ccatattcaa 300
110 tcgggagacc gcgtgtggtg gtttgatttt acggtagtgt ccgagcccgg ccactaccgc 360
111 atccacgata ctgccaacaa cactcattcc gatagtttcg ccattggcgc ggatgtttac 420
112 gatgttgctc tgcgcgaggc cgtgcgcgat ttcttctatc agcgtccgg gtttgccaag 480
113 gaggtgccct acgcccacgc gaactgggccc gatgccgctt ctccccgca ggacgtcgcc 540
114 agccgccccca tctgggatat ggggaatgcc tccttgagc gcgatctcag cggcggttg 600
115 ttgatgacgg gcgatttcaa caagtacagc gagtggacgg gcgcgctcat cctggagctg 660
116 ctcttgccct atcaagggcg gcctgacgtc tttaccgatg attttgcat cccggaatcc 720
117 ggcaacgggtg tccccgacct gcttgacgaa gtcaaatggg gaatggactg gctcttacgc 780
118 atgcaggagc cgagcggggc tattctcggg aaagtttccg tgacggggca ccagagcgcc 840
119 agcccgcga gcaccgacac ccattccgct tactacggcc ccgtctcgac cgaggccact 900
120 gccatggctg ccgcccgttt cgccctcggg gcgactgtct ttgagagcgt aggcattgagc 960
121 gattatgccg tcaccctcga atccgtgccc atcgccgat ggaattggac catggtccat 1020
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123 gatacgctag ccaaccgtgt gatggcgccc gccatgctct tcgagcgcac gggcggtgcg 1140
124 gtctatcgcg atttcttcga tgtgcgctat ctcgatatgg agcccgcgca gtggtggtat 1200
125 ttcttccccct ttcaaggtga gctacaaaaa gctctcgccc actacacgac cctcccggga 1260
126 gcgacgccta gcgtctctgc cgacatccgc aaccggatgg cggcttctat aaacggtggg 1320
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130 ctgcactatc tccacggagt gaacccaatg ggcattggtct atcttagcaa catgtatgcc 1560
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132 gggacaatgc cctcacttca ctctacggtc ccgtcctggt tttcttttcg ggcgggtccc 1680
133 aatgccc aaa tacagcgga gcattcaggc gatccgagac caaccgctgc aaaaagccta 1740
134 ccttga 1746

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136 &lt;210&gt; SEQ ID NO: 3

137 &lt;211&gt; LENGTH: 581

138 &lt;212&gt; TYPE: PRT

139 &lt;213&gt; ORGANISM: Bacillus sp.

141 &lt;220&gt; FEATURE:

142 &lt;221&gt; NAME/KEY: VARIANT

143 &lt;222&gt; LOCATION: (1)...(581)

144 &lt;223&gt; OTHER INFORMATION: isolated from environmental sample from Sonachi Lake, Kenya

146 &lt;400&gt; SEQUENCE: 3

147 Met Asn Phe Ser Leu Pro Ile Arg Phe Phe Gly Ile Gly Pro Thr Ala

148 1 5 10 15

149 Gly Phe Phe Leu Leu Leu Met Gly Ser Ser Ala Leu Val Ala Ser Thr

150 20 25 30

151 His Thr Asp Lys Ile Arg Ile Asp Gln Phe Gly Tyr Pro Ala Asp Ala

152 35 40 45

153 Thr Lys Val Ala Val Ile Ala Asp Pro Gln Ile Gly Trp Asn Ser Ala

154 50 55 60

155 Glu Ser Tyr Ser Pro Gly Ala Thr Leu Glu Val Arg Arg Val Asn Asp

156 65 70 75 80

157 Gly Val Val Val Phe Ser Gly Ser Pro Val Pro Trp Asn Gly Gly Ala

158 85 90 95

159 Ile His Ile Gln Ser Gly Asp Arg Val Trp Trp Phe Asp Phe Thr Val

160 100 105 110

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161 Val Ala Glu Pro Gly His Tyr Arg Ile His Asp Pro Ala Asn Asn Thr
162      115      120      125
163 His Ser Asp Ser Phe Ala Ile Gly Ala Asp Val Tyr Asp Val Val Leu
164      130      135      140
165 Arg Glu Ala Val Arg Met Phe Phe Tyr Gln Arg Ser Gly Phe Ala Lys
166 145      150      155      160
167 Glu Val Pro Tyr Ala His Ala Asn Trp Ala Asp Ala Ala Ser His Pro
168      165      170      175
169 Gln Asp Val Ala Ser Arg Pro Ile Trp Asp Met Gly Asn Ala Ser Leu
170      180      185      190
171 Glu Arg Asp Leu Ser Gly Gly Trp Phe Asp Ala Gly Asp Phe Asn Lys
172      195      200      205
173 Tyr Ser Glu Trp Thr Gly Arg Val Ile Leu Glu Leu Leu Ala Tyr
174      210      215      220
175 Gln Gly Arg Pro Asp Val Phe Thr Asp Asp Phe Gly Ile Pro Glu Ser
176 225      230      235      240
177 Gly Asn Gly Val Pro Asp Leu Leu Asp Glu Val Lys Trp Gly Met Asp
178      245      250      255
179 Trp Leu Leu Arg Met Gln Glu Pro Ser Gly Ala Ile Leu Gly Lys Val
180      260      265      270
181 Ser Val Thr Gly His Gln Ser Ala Ser Pro Pro Ser Thr Asp Thr His
182      275      280      285
183 Pro Arg Tyr Tyr Gly Pro Val Ser Thr Glu Ala Thr Ala Met Ala Ala
184      290      295      300
185 Ala Ala Phe Ala Leu Gly Ala Thr Val Phe Glu Ser Val Gly Met Ser
186 305      310      315      320
187 Asp Tyr Ala Val Thr Leu Glu Ser Ala Ala Ile Ala Ala Trp Asn Trp
188      325      330      335
189 Thr Met Val His Pro His Val Pro Phe Asp Asn Thr Gly Phe Ala Ser
190      340      345      350
191 Val Ser Pro Ser Arg Asn Ala His Asp Thr Leu Ala Asn Arg Val Met
192      355      360      365
193 Ala Ala Ala Met Leu Phe Glu Arg Thr Gly Gly Ala Val Tyr Arg Asp
194      370      375      380
195 Phe Phe Asp Val Arg Tyr Leu Asp Met Glu Pro Val Gln Trp Trp Tyr
196 385      390      395      400
197 Phe Phe Pro Phe Gln Gly Glu Leu Gln Lys Ala Leu Ala His Tyr Thr
198      405      410      415
199 Thr Leu Pro Gly Ala Thr Pro Ser Val Ser Ala Asp Ile Arg Asn Arg
200      420      425      430
201 Met Ala Ala Ser Ile Asn Gly Gly Glu Phe Leu Gly Ala Trp Asn Asn
202      435      440      445
203 Gln Thr Asp Ala Tyr Arg Ala Tyr Leu Lys Asp Gln Asp Tyr Thr Trp
204      450      455      460
205 Gly Ser Asn Lys Thr Lys Ser Gln Ala Gly Phe Phe Phe Glu Gly Val
206 465      470      475      480
207 Arg Arg Leu Gly Leu Asn Pro Ala Asp Ala Ala Ala His Arg Asp Ala
208      485      490      495
209 Ala Met Gly Tyr Leu His Tyr Leu His Gly Val Asn Pro Met Gly Met

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210		500		505		510
211	Val Tyr Leu	Ser Asn Met Tyr Ala	Ser Gly Ala Asp Arg	Ala Ala Asn		
212		515		520		525
213	Glu Ile Tyr His His Trp	Phe Arg Asp Gly Arg Thr Gly	Thr Met Pro			
214		530		535		540
215	Ser Leu His Ser Thr Val	Pro Leu Leu Val Phe Phe Arg	Ala Gly Pro			
216	545		550		555	560
217	Asn Ala Gln Ile Gln Arg	Lys His Ser Gly Asp Pro Arg	Pro Thr Arg			
218		565		570		575
219	Ala Lys Ser Leu Pro					
220		580				

VERIFICATION SUMMARY

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Input Set : A:\796\_2\_PCT\_SeqListing.TXT

Output Set: N:\CRF4\04052007\J549943.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number

L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date